METHOD AND DEVICE FOR TRANSDERMAL ELECTROTRANSPORT DELIVERY OF FENTANYL AND SUFENTANIL

ABSTRACT OF THE DISCLOSURE

The invention provides an improved electrotransport drug delivery system for analgesic drugs, namely fentanyl and sufentanil. The fentanyl/sufentanil is provided as a water soluble salt (eg, fentanyl hydrochloride) dispersed in a hydrogel formulation for use in an electrotransport device (10). In accordance with one aspect of the invention, the concentration of fentanyl/sufentanil in the donor reservoir (26) solution is above a predetermined minimum concentration, whereby the transdermal electrotransport flux of fentanyl/sufentanil is maintained independent of the concentration of fentanyl/sufentanil in solution. In accordance with a second aspect of the present invention, the donor reservoir (26) of the electrotransport delivery device (10) is comprised of silver and the donor reservoir (26) contains a predetermined "excess" loading of fentanyl/sufentanil halide to prevent silver ion migration with attendant skin discoloration. In accordance with a third aspect of the present invention, a transdermal electrotransport delivered dose of fentanyl/sufentanil is provided which is sufficient to induce analgesia in (eg, adult) human patients suffering from moderate-to-severe pain associated with major surgical procedures.